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The Design and Impact of a Rural Community Supported Doula Program

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WCMHS Doula Project Study

Title: The Design and Impact of a Rural Community Supported Doula Program

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Abstract

Objective: to evaluate the design and impact of a doula program in rural Vermont by exploring client demographics and perspectives on the doula care received. This research aims to better understand the population the program serves, the specific challenges they face, and how to mitigate these challenges in the perinatal and post-partum period with a social work model of doula care.

Design: a qualitative, descriptive study giving voice to the client experience of a doula program steeped in a social work model of care.

Methods: semi-structured interviews carried out in July and August of 2021. Interviews were coded and analyzed thematically.

Setting: A doula program offered by a mental health agency, offering doula services for clientele with a mental health diagnosis and qualifications for VT Medicaid.

Results: Significant portions of participants reported life challenges due to lack of resources, abuse, and mental health concerns, of which having a social-work focused doula was helpful in terms of logistical and emotional support. Without a doula, access and experience of healthcare during the prenatal, birthing, and post-partum period would have been more challenging for the population interviewed. Themes that arose included doula as logistical support, the doula's role in emotional/mental health support, and the doula as educator and advocate for a socioeconomically high-risk population.

Key conclusions and implications for practice: The WCMHS Doula Program is serving a high-risk population which would be beyond the reaches of more typical doula models. Doula work that is within the field of social work increases access and mitigates challenges that other doula models do not. Placing doula services within a community mental health agency and offering case management style doula care allows the services to make great impact on the lives and wellbeing of people who would otherwise face significant challenges in accessing healthcare. This has large implications for increasing equity of doula offerings and makes great strides in improving birth outcomes and experiences for an at-risk population. This study indicates the value of a social work model of doula care and the importance of bringing doula services to populations that have historically been left without access.

Key words: doula, case management, at-risk population, rural health, pregnancy, childbirth support, advocacy, health equity

Introduction:

Emotional and physical support during reproductive experiences has existed in various capacities throughout history. In recent decades, the term “doula” has been used to define a manifestation of such supportive care within U.S birthing culture. A doula is defined as a non-clinical birth worker trained to provide physical, emotional, and educational support for clients during their pregnancy, labor, and post-partum experience (1). Evidence demonstrates physiologic and emotional benefits of having a doula present during childbirth with measurable clinical benefits to both the parturient and the baby. A meta-analysis of randomized control trials found people laboring with doula support had higher rates of spontaneous vaginal birth, shorter labors, lower rates of epidurals, cesarean deliveries, and vacuum assisted deliveries, as well as higher infant Apgar scores and reported greater satisfaction (2). Furthermore, continuous labor support and guidance increases the birthing person’s feeling of control and participation in their care and decision making during the birth process (3). Conclusions have therefore been drawn that continuous support during labor may improve outcomes for mother and baby and no adverse outcomes of having a doula have been identified (3).

While the benefits of having a doula during labor have been extensively studied and supported, research in the field has also noted socioeconomic disparities in access to doula services (4). Given that healthcare disparities are already so stark and the fact that doulas can have a positive effect on reproductive health outcomes, the importance of broadening access to doula services is salient. Women of low socioeconomic status have lower rates of preventative care and therefore have higher rates of adverse reproductive health outcomes. Barriers include inability to afford care, issues with transportation, adverse previous experiences with the healthcare system, no primary care home, and lack of insurance (6). When prenatal and preventative care aren’t accessible, complications arise that could have been prevented and make for a disproportionate experience of adverse health outcomes among lower income women (8). Given research demonstrating how women of color and low-income women are at greatest risk for adverse health outcomes associated with childbirth, there has been increasing advocacy in recent years to expand doula access. There has been advocacy for doulas to be covered by Medicaid, supported by studies proving the cost effectiveness of doula care (5). Other initiatives include medical centers developing in-house doula programs, either with volunteer doulas or employed by the hospital (6). However, these initiatives are still limited. A national survey demonstrated that only 6 percent of women utilize doula care and that women insured by Medicaid are more likely to have unmet desire for doula care as compared to those insured privately (7).

Pregnancy can be a time of stress and poor emotional wellbeing regardless of social circumstance, but research demonstrates higher rates of anxiety and depression among pregnant people who are socially isolated, have decreased social support, low self-esteem, single parent status or are in a poor relationship with their partners, and/or living in poverty (9). Furthermore, research suggests a correlation between adverse childhood events (including childhood experiences of psychological, physical, and sexual forms of abuse as well as childhood household dysfunction such as substance abuse, mental illness, violence, and incarceration) and poor health outcomes later on in adulthood; a study demonstrating the association between adverse childhood events and mortality/morbidity found that an ACE score of greater than or equal to 4 is associated with increased odds for drinking, smoking, risky HIV behavior, diabetes, stroke, and depression, among other health concerns (10). A study of low-income women in a home visiting program in Wisconsin found a correlation between high ACE scores and poor birth outcomes such as pregnancy loss, preterm birth, and low birth weight (11). Rural lifestyle limiting access to healthcare put patients further at risk of adverse health outcomes. Risk factors of chronic health conditions including hypertension, pre-existing diabetes, and heart, lung, and kidney disease are more prevalent among women in rural environments. Behavioral health issues such as substance abuse and drug overdoses have been linked to isolation, stigma, unemployment, and lack of access to care have also been cited as both prevalent in rural environments and impactful on access to care (12). An analysis looking at significant rural health barriers and positing solutions to healthcare reform identified the importance of healthcare coordination and collaboration, calling for providers and community agencies to collaborate to meet the unique rural community needs (13).

The Washington County Mental Health Services Doula Project Background:

The Washington County Mental Health Services (WCMHS) Doula Project is a unique collaboration between WCMHS and Central Vermont Medical Center (CVMC) offering doula services to at-risk pregnant clients with mental health diagnoses qualifying for Medicaid. The doulas, employees of WCMHS, are community support workers first and foremost, also trained as doulas. WCMHS funds the case management and community support work of the doula services, which include accompaniment and transportation to prenatal appointments, prenatal home visits, childbirth education, and post-partum support in accessing resources, lactation and parenting education, and emotional caregiving throughout the whole process. The labor support is currently financially supported by Central Vermont Medical Center. Given the needs of this rural population, emphasis of doula care is on case management and mental health support. Approaches are tailored to individual need and the case management model of doula services allows for early referral to wrap around social support; with assistance in accessing resources such as mental healthcare, financial assistance, secure housing, and logistical advocacy navigating various social service agencies. WCMHS Doula Project was developed from a community need. Since its inception, the program has served upwards of 150 clients. This doula program is unique in its placement of doula services within the realm of social work. Navigating with clients through complex issues such as mental health concerns, intimate partner violence, drug use and recovery, and poverty, the doulas provide continuity during a time of transition for a population where any disruptions or changes in life can be incredibly destabilizing to mental and physical health and wellbeing.

The population served by the WCMHS Doula Project faces many of the healthcare challenges of rural communities posited by previous literature. A key inquiry of this study is evaluating the impact of innovative solutions such as the WCMHS Doula Project. This study seeks to understand the complex issues this population faces and the ways in which doulas can mitigate and impact healthcare disparities in a rural disadvantaged population. While literature is robust in understanding the ways in which doula care improves medical health outcomes for pregnant and laboring people, this study calls for a more nuanced understanding of “good birth outcome.” Given the numerous hardships this rural population faces, research protocol gave voice to the client experience to better understand value and benefit of doulas beyond reductionist health outcomes. Key questions include: what is a good birth outcome according to service recipients? In what ways does this population define the role of a doula, based upon their particular experience of this program? What were the biggest challenges that this specific population faced during pregnancy and how did the doulas mitigate these issues and impact the pregnancy, birth, and post-partum experience of the clientele they served? More research is needed to evaluate the specific needs of at risk disadvantaged populations and how doula care can be expanded upon. This study makes clear the importance of social work considerations and offerings beyond childbirth education and labor support to be included in the provision of doula care in order to adequately support populations at risk for adverse health outcomes, mental health concerns, and lack of resources during perinatal and post-partum experiences.

Methods:

Setting: A doula program embedded within a mental health agency in rural Vermont offering doula services to clients with mental health diagnoses qualifying for Medicaid.

Design: A qualitative, descriptive study giving voice to the client experience of the doula program.

Recruitment: Prospective research participants were individually contacted by the WCMHS Doula Project coordinator. Not everyone who had been a client with the WCMHS was contacted given changes in contact information or loss of contact with WCMHS. While recognizing the inherent bias and limitation in targeted recruitment, this study chose to do this method of recruitment for feasibility purposes. Given the targeted recruitment, the response rate was exceedingly high; with 25 of the 27 previous clients recruited completing an interview by the time of research culmination.

Data Collection: Semi-structured qualitative interviews were conducted during July and August of 2021. Each participant was interviewed for one hour, either via phone or in person. Interviews were done in a private setting in accordance with participant preference. Each participant was offered the option of a phone or in person interview, with in person interviews following COVID19 precautions, in accordance with University of Vermont Research Protocol. In person interviews took place at participant's homes or in the WCMHS office in Barre, Vermont. The interviews all began with an 11 demographic questions (Appendix 3), followed by an Adverse Childhood Event survey (Appendix 1). Participants were then asked 15 interview questions regarding their experience with the Doula Project (Appendix 2). Topics included pregnancy history, perceptions of doula care, experience of pregnancy, labor, and post-partum doula support, and an opportunity to share their birth story. Project information and consent considerations were reviewed and verbal consent was obtained at the beginning of the interview. Verbal as opposed to written consent was done due to majority of interviews being done remotely in accordance with COVID protocol.

Data Analysis: All recordings were reviewed and transcribed by the principal investigator and the research assistant. Two research assistants then coded the transcripts, finding common themes that arose in responses. To ensure analysis validity, the research assistants independently analyzed the transcripts and the Principal Investigator refrained from coding the semi-structured interview questions in efforts to reduce study bias, having been present at all the interviews. The principal investigator reviewed the basic demographic information and evaluated themes and responses based on the research assistants' coding. Interviews were recorded and transcribed by the principal investigator and research assistant. All participants were given a number and subsequently de-identified on all recordings and transcripts collected, in accordance with Institutional Review Board study protocol, approved by the University of Vermont.

Results:

Participants:

25 previous doula clients were interviewed, all having received doula services between the years of 2013 to 2021, with the majority of clients birthing with the program in 2018 through 2020. 17 participants had received doula services for one pregnancy. 5 participants had the doulas for two pregnancies and 3 participants had doula services three times. For repeat clients of the doula program, data was collected about each pregnancy, yielding a total of 34 birth experiences that the research could analyze. Of the birth experiences recorded, 9 were first birth experiences

and 22 had had children previously. All participants self-identified as white. Their ages ranged from 20 to 38 years of age at the time of pregnancy.

Social Demographics, participant reported:

Housing	17 reported stable housing, 8 reported unstable living conditions (living in motels due to intimate partner violence concerns, homeless, or living with relatives due to lack of housing).
Income	Income of participants ranged from no income to 80,000 dollars per year, with 60 percent of participants living on less than 1,000 dollars a month at the time of doula services. Overall average annual income of 12,000 USD. Many reported subsisting on public assistance (unemployment, social security, disability).
Transportation	10 participants cited the doulas as their primary mode of transportation, the rest either had their own car or family members that could drive them to appointments.
Intimate Partner Violence	8 participants noted IPV during pregnancy and 5 cited previous experience with IPV in prior life, but not during their pregnancy.
Mental Health Concerns	12 participants reported Depression, 16 reported Anxiety, 7 reported PTSD, and 10 reported Post-Partum Depression following their births. 7 patients cited emotional or physical abuse at the time of pregnancy which complicating their mental health experience.
Drug Use	8 participants reported a history of use (drugs cited were heroine, crack, and marijuana). One participant reported using methadone during pregnancy. 15 reported using tobacco during pregnancy.
Adverse Childhood Event Scores (1-10 scale)	9 participants reported a score of 1-3, 10 a score of 4 to 7, and 6 a score of 8 to 10. 60 percent of participants reported an ACE score of greater than or equal to 4.
Resources Received	22 participants reported utilizing at least one of the following resources during their time with the doulas: WIC, Reach Up, Food assistance, Home Health, Unemployment, Disability, Social Security.

Birth Demographics:

Birth Outcomes:	All live deliveries. 43% spontaneous vaginal deliveries, 14% induced vaginal deliveries, 25% repeat c-sections, and 18% primary c-sections (as compared to national primary c-section rate of 21% (15)). 88% born at term, 12% at 36 weeks or earlier.
Location:	29 born at CVMC, 2 at UVMMC, 1 at DHMC, and 1 at Copley Hospital
Medical Concerns Reported:	Most common conditions: Anemia (4 participants), Pre-Eclampsia (3 participants) and Gestational Diabetes (3 participants).

Themes:

The results of the semi-structured interviews were coded for themes. Themes that emerged across multiple question categories included *the doula's role in emotional/mental health support, logistical support, and education/advocacy.*

The Doula Role In:	Description:	Participant Quotations:
Emotional/Mental Health Support	<p>Participants reported choosing to have a doula due to desire for a stronger support system, defining a doula as “like a friend/family member.” Participants commonly noted that doulas helped to mitigate challenges due to mental health concerns. Emotional support was the most common response for how doulas impacted the prenatal, labor/delivery, and post-partum periods. Majority cited home visits and phone check ins as one of the most impactful services provided, particularly during post-partum.</p> <p>When asked why participants chose to have a doula, 15 cited the desire for a stronger support system. In describing the definition of a doula, 21 understood a doula as someone who provides emotional and physical support. 3 participants defined a doula as a “like a friend/family member” and 8 cited doulas as providers of post-partum support. Of the patients who</p>	<p><i>“They helped me by being a friend, an ear to listen to, somebody who is not going to judge you, who helps you find additional resources if you need them. I don’t think I would have survived the last six weeks of my pregnancy without them.”</i></p> <p><i>“I was experiencing suicidal thoughts because of everything that happened to me. The doulas helped me by making me feel like I wasn’t alone.”</i></p> <p>Another participant, struggling with intimate partner violence during pregnancy reported, <i>“While experiencing the relationship issues, I talked to them and they told me if I needed anything or needed a way out to just give them a call and get away for a few hours. I called my doula and we got out....went for a walk, just to clear my head. She was so helpful with that.”</i></p> <p>Another participant cited the mental health support as the most helpful thing the doulas did for her. She said, <i>“They are very aware of mental health and abuse, so it was really nice having people who understood. Talking to doctors about this stuff was very challenging – they are robotic. The level of empathy on the part of the doulas was really helpful during this time.”</i></p>

	<p>reported mental health concerns, all reported that the doulas helped to mitigate these challenges by offering support during their pregnancy.</p> <p>When asked what the experience would have been like without a doula, 17 reported that their experience would have been more emotionally challenging and 17 also suggested they would have experienced more loneliness and anxiety.</p>	<p>When asked how pregnancy and birth would have been different without a doula, a participant said, <i>“I think it would have been horrible. I would have been so much more scared, and I would have had an anxiety attack the entire time. I am so thankful for my doula. This is one of the most amazing things I’ve ever done in my life and I am grateful to have been a part of this program. I would recommend it to anybody.”</i></p>
<p>Logistical Support</p>	<p>Participants commonly reported transportation and prenatal appointment accompaniment as impactful, with 17 participants reporting transportation as the primary impact that the doulas had on their pregnancy. Participants also noted the provision of baby supplies and other resources as helpful in their experience.</p>	<p><i>“It took a lot of stress off me, because otherwise I didn’t have my own transportation. Having that resource that finds a way no matter what really decreased my mental stress.”</i></p> <p><i>“I was struggling financially and couldn’t get down to the store to get diapers or medicine or formula, but all I needed to do was call my doula and she would be there, dropping me off diapers and cases of formula. If I needed clothes, they would help me with supplying clothes. The resources they have are phenomenal.”</i></p>
<p>Education and Advocacy</p>	<p>Doula commonly described as “someone who provides education.” Education and information dissemination was commonly reported as an impactful part of care provided. Lactation support was also cited. Participants noted without a doula they would have felt less educated.</p> <p>4 participants cited the reason they decided to have a doula as the desire for more knowledge and education. When asked to define a doula, 10 described a doula as someone who provides education. 5 participants cited information and education as the most helpful aspect of doula care. When asked what the</p>	<p><i>“They walked me through the entire labor process to know what was going to happen and how it all works.”</i></p> <p><i>“They made sure I knew what was happening because that was my biggest fear. I was scared to not know what was going to happen to me.”</i></p> <p><i>“They were there to support me and help me breathe through the contractions, suggesting stuff to help me get through the pain. They went and got me little snacks. They helped me walk the halls to speed up the process. They were there for emotional support. They were there to help give information on decisions that I needed to make.”</i></p>

	<p>experience would have been like without a doula, 4 participants responded that they would have felt less educated.</p>	
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Participant Recommendations for Program Improvement: A common response was for increased community awareness and broader reach of the program. 19 participants responded that there was nothing the doulas could have done better and were happy with their experience with the program. One participant suggested having one doula throughout the entire process, but others did not articulate this desire and were satisfied with having a few doulas throughout their experience. In terms of overall improvements, the most common response was a recommendation for increased awareness of the program. Earlier referral was also cited as well as spreading doula services to other counties in Vermont.

What is a “good birth.”: Almost half the respondents cited a good birth outcome simply as *a healthy mom and baby*, with no mention of route of delivery, birth plan, or intervention concern. Other responses included, *feeling positive about oneself, having good support people, not having external stressors or needing anything “extra.”* One patient with a history of sexual assault noted that having a good birth would include, *“lower lights and less people in the room”* and said having *“lots of people and older men in the room was really hard.”*

Based on participant reporting, the data demonstrates doula involvement in pregnancy, labor, and post-partum that goes beyond that of more typical doula service offerings. The majority of participants reported meeting their doula in the first trimester and having the doula at the majority of their prenatal appointments, with 72 percent of participants reporting that the doulas gave them rides to their appointments. Almost all of the participants reported having other social service support, citing doula involvement as instrumental in their ability to access and connect with such services. Post-partum home visits were also routinely cited as immensely helpful, with support extending up to a year following childbirth (much longer than more typical doula offerings). This support also had a social work model, with access to resources, housing assistance, logistical support and transportation to appointments being cited again as especially helpful elements of the WCMHS Doula Project.

Discussion:

Due to the clinical and social benefits of doula care (2,3), previous research has called for an expansion of doula care beyond serving populations that can afford to hire a doula (5,6). Doulas are commonly privately employed and therefore serve a clientele that can afford their care (8). In efforts for greater equity of doula care accessibility, initiatives have included hospital or community-based doula programs that are free of charge to the clients (either funded by insurance or for free by volunteer doulas) (8). The WCMHS Doula innovatively places doula services within a community mental health organization collaborating with a local hospital; demonstrating a hybrid model that extends beyond the realm of the privileged and into an important and needed sector of marginalized populations that wouldn’t otherwise have access.

Evaluation of this program through the lens of the clients demonstrates the numerous ways that this program differs from more typical doula services and those previously cited in the literature:

Typical Doula Model	WCMHS Doula Model
<ul style="list-style-type: none"> • Doulas most commonly are privately employed (16). • Sometimes hospital based (16). 	<ul style="list-style-type: none"> • WCMHS doulas are employees of a community mental health agency working in collaboration with a local hospital.
<ul style="list-style-type: none"> • Most often client pays out of pocket; average costs of hiring a doula range from 600 to 2500 USD (16). 	<ul style="list-style-type: none"> • Costs nothing for clients. Cost is covered by WCMHS (prenatal and post-partum visiting and case management support) and CVMC (labor support).
<ul style="list-style-type: none"> • An estimated 40 percent of women are unfamiliar with the concept of doula care and the proven benefits of the support they provide (17). • Cost is often prohibitive with doula care tending to be reserved for wealthy, white people with the means to pay out of pocket (17). • Only 6% of pregnancies are supported by doulas nationally (18). 	<ul style="list-style-type: none"> • All patients who qualify/deemed “at risk” by health professionals are informed of the program and offered a doula. • Doula services are free of charge, falling within services covered by WCMHS eligibility requirements. • Clients interviewed reported an average annual income of 12,000 USD. Many reported subsisting on public assistance (unemployment, social security, disability).
<ul style="list-style-type: none"> • Typically, 1-3 visits prenatally, birth support, and 1-3 visits post-partum, completing services by around 6 weeks post-partum (19). 	<ul style="list-style-type: none"> • Majority met early in pregnancy with accompaniment to all prenatal appointments in addition to home visits, labor support, and services up to a year post-partum.
<ul style="list-style-type: none"> • Doula role typically includes advocacy, birth education, and emotional/physical support during the pregnancy, birth, and post-partum process (1). • Studies looking at hospital-based doula programs, while improving access for low-income women, found that participants reported need for more prenatal and post-partum support, as opposed to more typical birth focused caregiving (18). 	<ul style="list-style-type: none"> • WCMHS Doula Project, while providing advocacy, education, and emotional/physical support, also provide case management for clients: provide transportation, home visiting, logistical support, supplies, and connection to local resources including mental health support, housing, financial assistance, substance use recovery, and trauma informed support for survivors of sexual violence and intimate partner violence.

Previous research has demonstrated the challenges that rural and impoverished populations face in accessing reproductive healthcare services and the subsequent effect this can have on birth outcome (11). This study unveiled many of the challenges cited in the literature - insecure housing, issues with transportation, mental health concerns, intimate partner violence, and high ACE scores. With 60 percent of participants scoring 4 or higher on the ACE questionnaire, it is clear that this population is at risk for poor birth outcomes. That being said, participants overwhelmingly cited the doulas as instrumental in mitigating these challenges and the effect, from the perspective of the doula clients, is overall immensely positive. By centering the clients as the expert in their own experience and honoring their voice as the key evaluators of this program, this research project unveiled the complexity and hard considerations of client’s lives and the ways in which a broadened understanding of doula work can make a big difference in experiences of reproductive health.

Doula work as a social service- the social work model of care:

Previous research has called for providers and community agencies to collaborate to meet unique rural needs (13). The WCMHS Doula Project is an example of moving beyond the realm of typical doula services and expanding notions of doula care to include case management and logistical support that this rural population needs. The study illuminated how this doula program is situated within and deeply aligned with a social work model of care; wrap around support that focuses on case management and connecting clients with the resources in the community that are available to assist with various complex needs of day-to-day life. This program models a radical and innovative response to the issue of accessibility and compensation of doula services that has long been a struggle for doula provision (1). For populations struggling with concerns of mental health, poverty, abuse, drug use, among many other factors, doula work as first and foremost social work appears to be particularly successful and crucial to the health and wellbeing of this community. This research suggests that one avenue for expanding doula access and adequately compensating doulas for their time and important work may be to place doula work within the realm of social work. If community health workers are trained as doulas and can offer such wrap around support during a time of great transition in people's lives, disadvantaged communities could deeply benefit in a variety of ways. Pregnancy is a time of immense uncertainty and change (9). Mental health is of concern, particularly if people have histories or adversity that increases their risk. Offering wrap around case management and emotional support has proven formative and beneficial for this population. While this assessment is not focused on medical outcome, the client perspective speaks volumes and posits the patient as the best evaluators of their own experience.

What is a good birth?

Moving beyond reductionist understandings of "good birth outcomes" and into the more nuanced space of understanding the clients' perspectives on their own births, allows for deeper understanding of the impact of doula services on the lives and wellbeing of the clients supported by this program. Maria Rossi says, "*Working with this population of clients has given me a much deeper understanding of the nuances of birth outcomes. There is so much being touted with birth support and lower c-section rates – which is important for sure! – but this kind of doula work and our outcomes go beyond that. I have learned a lot about the many nuances of what a "good birth" means to different people.*" The primary c-section rate, often a metric utilized to demonstrate the efficacy of doula care, was lower than the national average the year prior, but the value of this program goes far beyond previously utilized metrics of good birth outcomes to support doula coverage. The population that the WCMHS Doula Project services is faced with complicating life factors and adversity that makes evaluation based on c-section rates or other interventions not fully representative in evaluation of a good birth outcome. Data collected in this study demonstrates the value of listening to the patient experience to better understand desires and needs to achieve a "good birth outcome." While obstetrical considerations of birth outcome in relation to doula work are a piece of the puzzle, to reduce doula benefits to medical outcome runs the risk of missing other immensely valuable aspects of doula work. This is particularly salient in populations at risk of socioeconomic concerns and comorbidities due to the complex effects of poverty, cycles of abuse, and mental health concerns in a rural and marginalized populations.

Limitations:

This is a qualitative, descriptive study based entirely in patient reports. There is potential for bias on the part of the researchers as well as participants due to the process of self-reporting. Furthermore, the sample size is small and the recruitment was relatively targeted, based on logistics of which participants the program still had contact with. Adversity and difficult life events can increase the likelihood of the agency losing contact with prior clients, indicating the potential of those contacted to be of greater socioeconomic advantage than is representative of the entire population this program serves. This study took place in a rural and predominantly white area of the country. Therefore, another limitation of this study is that results cannot be applied to more urban and/or ethnically diverse

populations. All participants self-identified as white. Further exploration into the specific considerations of the pregnancy and birthing experience of people of color and the intersectional adversity that affects health inequities is needed to better understand rural reproductive health concerns and the benefit of doulas as community health workers.

COVID Considerations and avenues for future research:

While the majority of the participants were not pregnant or birthing during the COVID19 pandemic, of the ones who were, all cited COVID as a confusing and scary time. Those who were pregnant at the beginning of the pandemic spoke of difficulties in having to go to the appointments alone. Virtual appointments were hard for some participants and valuable for others. The doulas, as collaborators with Central Vermont Medical Center, were able to attend births, in addition to the one support person the patient was allowed to have present during the height of pandemic restrictions. While this study did not focus on the doulas' role in mitigating COVID challenges for patients, this could be an important avenue for future research.

Since this study's inception, there has been an extension of a grant to cover doula services for all patients at CVMC who desire one. There have since been 25 patients who have birthed with the community doulas, contracted through WCMHS and funded by the grant. This would prove as a rich comparison as this grant extended doula services to a broader population, one where the majority of clients were privately insured and potentially experiencing less adversity and socioeconomic hardship. Further research may include conducting semi-structured interviews following the same interview format as posited in this study and then comparing participant responses, paying particular attention to participant demographics, life circumstances, ACE scores, and how that relates to the client experience of doula care and support during pregnancy, labor, and post-partum.

Conclusion:

The WCMHS Doula Project is serving a high-risk population which would be beyond the reaches of more typical doula models. Placing doula services within a community mental health agency and offering a case management style of doula care allows the program to make great impact on the lives and wellbeing of people who would otherwise face significant challenges in accessing healthcare. This has large implications for increasing equity of doula offerings and improving birth outcomes. The notion of a "good birth outcome" can be evaluated from the client perspective, giving voice to those most marginalized who are in fact the experts in their own experience. This study indicates the value of a social work model of doula care and the importance of bringing doula services to populations that have historically been left without access. The WCMHS Doula Project serves as a model of equitable provision of doula care that has great impact on the community it serves. As other doula programs grapple with how to compensate and design an equitable doula program, the WCMHS Doula Project's model should be considered as an example of doula services based within a community health agency serving the specific needs of a socioeconomically disadvantaged community. Greater awareness and expansion of this model to other communities would make great strides in reducing reproductive health inequities of which doula services can be instrumental in mitigating.

Appendix 1: ACE Questionnaire

Adverse Childhood Experience (ACE) Questionnaire
Finding your ACE Score ra hbr 10 24 06

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household **often** ...
Swear at you, insult you, put you down, or humiliate you?
or
Act in a way that made you afraid that you might be physically hurt?
Yes No If yes enter 1 _____

2. Did a parent or other adult in the household **often** ...
Push, grab, slap, or throw something at you?
or
Ever hit you so hard that you had marks or were injured?
Yes No If yes enter 1 _____

3. Did an adult or person at least 5 years older than you **ever**...
Touch or fondle you or have you touch their body in a sexual way?
or
Try to or actually have oral, anal, or vaginal sex with you?
Yes No If yes enter 1 _____

4. Did you **often** feel that ...
No one in your family loved you or thought you were important or special?
or
Your family didn't look out for each other, feel close to each other, or support each other?
Yes No If yes enter 1 _____

5. Did you **often** feel that ...
You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?
or
Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
Yes No If yes enter 1 _____

6. Were your parents **ever** separated or divorced?
Yes No If yes enter 1 _____

7. Was your mother or stepmother:
Often pushed, grabbed, slapped, or had something thrown at her?
or
Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?
or
Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
Yes No If yes enter 1 _____

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
Yes No If yes enter 1 _____

9. Was a household member depressed or mentally ill or did a household member attempt suicide?
Yes No If yes enter 1 _____

10. Did a household member go to prison?
Yes No If yes enter 1 _____

Now add up your "Yes" answers: _____ This is your ACE Score

Appendix 2: Semi-Structured Interview Questions

1. What is your pregnancy history? (How many times have you been pregnant and how were those experiences for you?)
2. What made you decide to have a doula?
 - a. How many pregnancies have you had a doula for?
3. In your experience, what is a doula? What services do they provide?
4. Could you share your birth story? How did it go, from your perspective?
5. Did you have any medical concerns (mental or physical health) that complicated your pregnancy, labor/delivery, post-partum?
 - a. Pre-term? High blood pressure? Diabetes? Bleeding?
 - b. Mental health – anxiety, depression, PTSD? How did this impact/show up in pregnancy? Did the doulas help with this challenge?
6. What does a good “birth outcome” mean to you?
7. What was your experience of pregnancy? How did the doulas impact?
 - a. When in pregnancy did you meet the doulas?
 - b. How many prenatal visits did they do with you? Appointments? Home visits? Education?
 - c. What was your greatest challenge during pregnancy? Did the doulas help with this challenge?
8. What was your experience of the birth process? How did the doulas impact this? What did they do?
 - a. How long were they there with you in labor?
 - b. What was your greatest challenge during labor? Did the doulas help with this challenge?
9. What was your experience of the post-partum period? How did the doulas impact? What did they do?
 - a. How many visits? How long after birth were you in contact with them?
 - b. Did they help you with parenting techniques – lactation etc? Education?
 - c. Did they help you with resources? Pediatrician appointments?
 - d. How did you feed your baby?
10. What was the most helpful thing the doulas did for you?
11. What do you think your pregnancy, labor, or post-partum might have been like had you not had a doula?
12. Is there anything the doulas could have done better? Anything you wish they had done? Anything you wish they hadn't done?
13. What recommendations do you have for the program? Any ideas for ways to improve?
14. If you were pregnant/giving birth during Covid-19: How did Covid-19 affect your experience of pregnancy? Did the doula help with any of these challenges?
15. Any other comments you would like to include in our study of the WCMHS Doula Project?

Appendix 3: Demographic Questions

1. Age:
2. Ethnicity:
3. Home town and town you lived in when you received doula services:
4. How did you get connected with the doulas?
5. Pregnancy demographics:
 - a. What was your due date?
 - b. Delivery date?
 - c. Birth weight?
 - d. Route of delivery?
 - e. Place of birth?
 - f. Length of stay?
6. Income at the time of doula services (estimated monthly):
7. Housing situation (what kind of housing, who do you live with):

8. Transportation method at the time of doula services:
 9. Other resources you receive (Ie. WIC, Disability, Food Stamps):
 10. Have you ever been emotionally or physically abused by your partner or someone important to you? (From Abuse Assessment Screen). If yes, were you experiencing this during your pregnancy/post partum period?
 11. Have you ever used recreational drugs? Tobacco? Alcohol?
 - a. Were you using the above substances at the time of your pregnancy/post partum?
 - b. At the time of your pregnancy/post partum, were you in treatment?
-

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